

## SECTION 1 - GENERAL PROCEDURES

### 1.01 SITE PLAN REVIEW

- A. All drawings submitted to the Engineering Division of the Environmental and Engineering Department must be ~~a maximum size of 24" x 36"~~ or 11"x17".
- B. All drawings must show linear feet of storm drains and linear footage of roadways.
- C. All of the following items must be received by the ~~Community Development Department~~ Planning and Zoning Division at least ten (10) working days prior to the scheduled date of the Department Review Committee (DRC) meeting.
  - 1. Site Plan to be reviewed
  - 2. Copy of recorded plat and/or survey
  - 3. Broward County's conditions for plat approval
  - 4. Schematic engineering plans showing and labeling the following items:
    - a. Circulation
    - b. Parking
    - c. Paving
    - d. Drainage
    - e. Grading
    - f. Traffic Control
    - g. Sidewalks
    - h. Water
    - i. Sewer
    - j. Other required Public Facilities pursuant to proposed use
- D. All of the following engineering items must be satisfied prior to site plan approval by the Planning and Zoning Board.
  - 1. Improvement Bond:

Prior to the approval of the site plan, the Developer shall submit to the Engineer, the Improvement Bond in the amount of 100% of the cost of the improvements such as paving, drainage, water, sewer, lakes excavation, pavement marking,

traffic and road signs, street lights, sidewalks and the like. The bond shall be accompanied by the estimated costs of improvements certified by a registered professional engineer.

After acceptance of the improvements by the City's Engineering Division the Improvement bond shall be reduced by 95% for a maintenance bond for 1 year after acceptance.

2. Street Lighting:

Prior to approval of the site plan, the Developer shall pay to the City \$1,000 per pole for street lighting on all public roads, poles being a maximum of 180 feet apart. Developer shall provide a plan to be approved by Florida Power and Light Company for the lighting of private roads and parking areas within the development. Lighting shall comply with City of Lauderdale Code of Ordinances.

3. Street Addresses:

The Developer shall provide all street addresses prior to the approval of the site plan. The address plan shall be approved by the ~~Community Development Department~~ Engineering Division.

4. Impact Fees:

City recreation, water, sewer, stormwater and road/intersection impact fees shall be paid or a binding letter of credit or other device acceptable to the City shall be provided.

## 1.02 ENGINEERING PERMITTING PROCEDURES

Once a site plan is approved by the City of Lauderdale, no development may occur without all appropriate development permits. This document sets minimum permitting criteria to assist developers, contractors and the general public in obtaining an engineering permit. Consult with the City Engineer prior to submittal to determine if additional information will be required.

The services of a consulting engineer are usually necessary to the applicant during permitting process.

A. City Engineering Plan Review Requirements:

- \_\_\_\_\_1. Submit three (3) complete sets of engineering drawings (including water, sewer, paving, drainage, signalization, geometrics, photometrics, site survey) signed and legibly sealed by an Engineer registered in the State of Florida. Original signature must be on the seal. All drawings are to be submitted on 11"x17" or 24" x 36"-sheets (3 folded sets of prints required). ~~Computer files shall be provided on 3 1/2" floppy disks in AutoCADD Release 14 format or latest version.~~ Electronic files (PDFs) shall be submitted for all submissions. Horizontal scale must be between 1"=20' and 1"=60'; vertical scale must be between 1"=2' and 1"=6'.
- \_\_\_\_\_2. Submit drainage calculations which are consistent with the approved site plan. A twenty-five year ~~one~~three-day design storm event shall be used for all development discharge, a five year one-day storm event shall be used for private/public roads and a one hundred year three-day storm event shall be used for building finished floor elevations.
- \_\_\_\_\_3. Submit fire flow (ISO standard) calculations and results of available fire flows.
- \_\_\_\_\_4. Requests for revisions and additional submittals will be made within ten (10) working days from the date of receipt of submittal package by the Engineer of Record. If revisions of the drawings are needed, resubmit three (3) sets of the revised engineering plans signed and sealed by the Engineer of Record.
- \_\_\_\_\_5. Submit certified cost estimates which include quantity take-offs and unit prices signed and legibly sealed by the Engineer of Record. Original signature must be on the seal. Increase bond amount if inadequate.
- \_\_\_\_\_6. Development Review Committee (DRC) review and approval.
- \_\_\_\_\_7. Planning and Zoning Board review and approval.
- \_\_\_\_\_8. City Commission review and approval.
- ~~-----~~9. Soil Erosion and Sediment Control Plan.

B. Other City Permits and Approvals Required Prior to Release of Engineering Permit as appropriate.

- \_\_\_\_\_1. Tree Removal Permit.
- \_\_\_\_\_2. Verification and copy of current valid contractor's license.
- \_\_\_\_\_3. Verification and copy of current valid occupational license.
- \_\_\_\_\_4. Verification and copy of current and valid liability insurance policy.
- \_\_\_\_\_5. Three (3) sets of shop drawings which have been approved by the Engineer of Record.

C. Potential Outside Agency Permits and Approvals Required Prior to Release of Engineering Permit:

- \_\_\_\_\_1. Broward County Department of ~~Natural Resource Protection~~ Environmental Protection and Growth Management Department ~~(DNRP)~~ approval for drainage, soil/water remediation and sanitary sewer collection and transmission.
- \_\_\_\_\_2. Broward County Health Department approval for water distribution.
- \_\_\_\_\_3. South Florida Water Management District (SFWMD) for drainage, dewatering and irrigation.
- \_\_\_\_\_4. Florida Department of Transportation (if project affects State roads).
- \_\_\_\_\_5. Florida Department of Environmental Protection for dredge and fill permit.
- \_\_\_\_\_6. Broward County Engineering (if project affects County infrastructure).
- \_\_\_\_\_7. Broward County Traffic Engineering for traffic engineering permit.
- \_\_\_\_\_8. Broward County Plat Office for final plat (provide the City with final plat approval and a mylar copy of the plat).

- \_\_\_\_\_9. Broward County Planning for County traffic planning issues.
- \_\_\_\_\_10. City of Lauderhill Building Department for building construction issues.
- \_\_\_\_\_11. ~~BellSouth for telephone service~~Local Communications service provider.
- \_\_\_\_\_12. Florida Power and Light Company for electricity.
- \_\_\_\_\_13. ~~Media One for cable T.V.~~Florida Department of Environmental Protection Agency NPDES permit (sites larger than 1 acre).
- 14. Waste Management

D. Fees: Provide the City with engineering permit fees. The engineering fees are calculated as provided for in Section 2.

E. Utilities Construction Plan Requisites:

- 1. All drawings are to be submitted on 11"x17" or 24" x 36" sheets (3 folded sets of prints required). ~~Computer files shall be provided on 3 1/2" floppy disks in AutoCADD Release 14 format or latest version.~~ Electronic files (PDFs) shall be submitted for all submissions. CAD files shall be included for all final submissions.
- 2. A location map shall be included on the drawing.
- 3. Each sheet shall bear a legible seal and original signature of the Design Engineer and include a title block, north arrow, Engineer's registration number, scale, date, references as to source of design information and notes.
- 4. Horizontal scale shall be between 1"=20' and 1"=60'; vertical scale to be between 1"=2' and 1"=6'. Regardless of the scale, an overall layout of the proposed project shall be included on one sheet of the plans submitted, indicating all phases of construction, existing utilities and proposed utilities. Where there is more than one sheet of drawings, a sheet index diagram is required.

5. All rights-of-way and easements shall be clearly defined on design and as-built drawings. The document setting forth the easements shall be referenced (e.g. by plat or otherwise).
6. Size and type of material for all water and sewer mains and service lines shall be shown. Size and type of valves and other appurtenances to the systems shall be clearly indicated on design and as-built drawings.
7. The exact location and size of all mains are to be shown within the right-of-way or within an easement. All service line locations and sizes shall be indicated on plans. Distances from right-of-way lines, property lines and from physical features to the water and sewer mains are required on all drawings.
8. Water distribution systems shall be designed so as to provide a continuous looped system with two (2) independent sources of water during all phases of construction.
9. All line deflection points shall be indicated (horizontal and vertical) on the plans. All water mains shall cross over drainage lines.
10. Profiles are required for gravity sewer mains and they are to have the following information: invert elevation; rim elevation; slopes and profile grade (center line or base line); continuous station measurements; continuous numbering of manholes; service laterals; other conflict features such as drainage pipes, etc.; kind of material, as PVC or DIP, etc. This information shall also appear on site plan. Manholes shall be installed away from ~~parking areas~~ wheel paths of the vehicles.
11. Off-set dimensions and detail drawings are required for all appendages, adjunct or auxiliaries from the main, full blown sketches are required for all areas where the details cannot readily be seen.
12. Lift Stations to be owned and operated by the City of Lauderhill, shall be submersible lift stations, manufactured by ~~Smith & Loveless, Inc.~~ Utility Department approved vendor, or equivalent to be approved by the Utilities Superintendent. If 15 horsepower or less, wet well stations may be approved on a case by case basis. Lift station drawings and specifications shall include the following:

- a. Plan, profile, detail and electrical schematics
- b. Flow calculations; -description of collection area
- c. Pressure head calculations
- d. Pump performance curves indicating efficiencies and horsepower and impeller size
- e. Model numbers and ratings shall be shown for all pumps and meters.
- f. Site Plan of the station with full measurements given and properly tied to property lines. Site Plan shall include fencing, vehicle double swing gate, pedestrian gate, control panel, water service, driveways, emergency pump-out connection, generator receptacle, lightning protection, SCADA system, etc. Site plan shall be at a scale of 1"=10'.
- g. All of the lift station area within fenced limits shall be paved.
- h. Pressure gages shall be placed on the discharge force main.

i. SCADA Controls

- 13. Public and private roadways shall be labeled; the names and/or numbers of the roadways, streets, avenues, etc. are to be clearly indicated on the plans. If the property is inside a block, then the side streets are to be shown with the names written and distances from the subject property to the side streets are to be written. Indicate lot and block numbers, if applicable.
- 14. The perimeter boundary lines of property to be serviced are to be clearly shown.
- 15. The outline of buildings to be serviced are to be shown.
- 16. Bench mark positions and their vertical values are to be shown.

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17. Adjoining lots and block numbers and owners are to be shown. Reference as to plat is to be written, Legal description of the property is to be written and indicated on the drawings. The street or mailing address is to be shown on the design drawing and on the as-built drawing.
18. Utilities shall be located within public rights-of-way or easements as indicated in Section 21-46 of the City of Lauderdale Code of Ordinances and shall be shown on all as-built drawings.
19. Location of water meters and their sizes with service line sizes are to be shown on the design plans and as-builts. Meters are to be installed in green areas and in non-traffic areas as approved by the Utilities ~~Superintendent~~Department. Developer shall furnish to the City, at no expense to the City, a supply of replacement meter heads for each size of meter 3-inch or larger that has been installed. For each size, the number to be furnished shall be equal to ten percent of the number installed, with at least one per size and all numbers greater than one rounded to the nearest whole numbers. All meters shall be manufactured by Neptune Water Meter Company, or approved equal. Proposed meters be equipped with or easily converted to include automatic meter reading technology.
20. Easement descriptions are to be written clearly with a point of beginning and a point of termination. Easements shall be shown on the Record Drawings. The plans shall reflect the description and shall carry additional information to facilitate construction of the worded description. Street corners are to be shown and the description shall relate the property being described to the streets. The scale shall be such to enable the direction of lines to be clearly observed. Where warranted, the plan is to be on more than one sheet with proper match lines shown for each street. The City reserves the right to approve the description and plans (Process for acceptance of easement, LDR Art. ~~III, 4.19(B)~~IV Sec. 6.19.
21. All pavement or parking areas shall be shown and referenced; all final planned elevations shall be established.
22. At the completion of the construction of the water and sewer systems and prior to a final inspection, Record Drawings are to



be drawn and submitted to the Utilities Department for review. All easements are to be clearly shown, all buildings to be serviced are to be shown with their street addresses, postal addresses, etc., written thereon. Record Drawings are to have all the design plan information plus any changes made during construction. Record Drawings are to represent what was constructed, and must be submitted as per Section 4.06 B (7) of these standards.

23. Apart from the showing of all meters, their sizes, locations etc. on the plan sheet, a summary note is to be written on the front sheet stating:
  1. The number and size of water meters
  2. The calculation for capacity and the ERC/s
  3. The use for the building; i.e., commercial, stores, factory, etc.
24. The City has the authority to approve all drawings (preliminary design, final designs, preliminary and final Record Drawings), as to technical representations, engineering consideration/designs, draftsmanship, clarity, scale, precision, confusion, etc., which drawings shall at all times be in conformity with City of Lauderhill minimum specifications and practices.
25. Drawings are reviewed ONLY for general compliance with City requirements. The Design Engineer shall be completely responsible for the Engineering design, technical competency and accuracy. The plans are approved with the condition that they shall conform to all City Ordinances, codes, standards and requirements. In case of conflict, the City Code of Ordinances shall supersede the plans. It shall be the responsibility of the Engineer of Record to have the plans approved by all other applicable federal, state, county or local agencies.
26. Plumbing Inspectors/Fire Department approval does not constitute approval of water and sewer construction drawings.

F. Paving and Drainage Plans Review

Provide three (3) sets, signed and sealed, showing the following information:

1. Paving and drainage construction plans
2. Paving and drainage details
3. Paving and drainage specifications
4. Pavement markings and signage plans
5. Proposed off-site improvements plans
6. Elevations of ambient ground along the perimeter of this parcel
7. As-built information of existing roads, drainage, sidewalks, electric poles, and other facilities
8. Existing and/or proposed lake and canal locations
9. Recorded and proposed easements and rights-of-way
10. Drainage Calculations
11. Flood Plain Elevation in NAVD.

### 1.03 STREET ADDRESSES

The owner/developer shall be responsible to prepare street address plan using the following guidelines:

- A. Drawings shall be of regular size (24" x 36") with all lot, block, unit, building and road numbers and legal description, zip code and location of the development shown clearly.
- B. For multi-story buildings, all units on the first floor shall commence with number 101 and all units on subsequent floors shall commence with the number of the floor as 201, 301 and the like.
- C. Odd numbers shall be assigned to units on the north and east sides of the road and even number shall be assigned to units on the south and west sides of the road.
- D. The addresses shall be reviewed and approved by the Community Development Department Planning and Zoning Division of the City of Lauderhill and the Engineering Division. Their signatures and stamps must appear on the address mylar, electronical copy (PDF).
- ~~E. The original mylar shall be filed with the Engineering Division.~~
- ~~F.~~ One copy of the approved address plan shall be submitted to the following agencies:

**CITY OF LAUDERHILL**  
**5581 W. Oakland Park Blvd.**  
**Lauderhill, FL 33313**

Community Development  
Department Planning and Zoning  
Division (3 copies)

Engineering Division (1 copy)  
 Fire Department  
 (5 copies)

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**BellSouth**, 8601 West Sunrise Boulevard, Plantation, FL 33322  
**Florida Power & Light Co.**, Wingate Service Center, 3020 NW 19<sup>th</sup> Street  
 Fort Lauderdale, FL 33311  
**U.S. Post Office**, SFMPC/Inverrary Branch, 6240 West Oakland Park Blvd.,  
 Lauderhill, FL 33319  
**U.S. Post Office**, Tamarac Branch, 7875 N.W. 57 St., Tamarac, FL  
 33320-9998  
**U.S. Post Office**, Lauderhill Crossroad Annex, 5580 W. Oakland Park Blvd.,  
 Ft. Lauderdale, FL 33313-9998  
**Media One**, 141 NW 16<sup>th</sup> Street, Pompano Beach, FL 33060  
**Broward County Traffic Engineering Dept.**, 2300 West Commercial Blvd.,  
 Ft. Lauderdale, FL 33309-3090  
**SUNSHINE STATE One Call of Florida, 1-800-432-4770**  
**911 Project Office**, ~~Attn: Ginnie Bonura~~, 115 South Andrews Avenue, Suite  
 325, Ft. Lauderdale, FL 33301  
**Broward County Elections Dept.**, 115 South Andrews Avenue, Room 102,  
 Ft. Lauderdale, FL 33301  
**U.S. Department of Commerce Bureau of the Census, Regional Office,**  
 101 Marietta St. NW # 300, Atlanta, GA 30303-2700, ~~attn: James~~

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#### 1.04 UTILITIES CONSTRUCTION

- A. Construction drawings for all water and sewer facilities to be built by the Developer between the service connections of the individual lots and the existing City water and sewer facilities must be submitted with the applications for connection to the City's utility systems. At that time the Developer shall pay a Plan Review Fee as specified in Section 2 of these standards.
- B. Submit three (3) sets of drawings (folded) and specifications for proposed additions and/or modifications to all utility systems for review and comment, accompanied by Broward County Health Department, Broward County Environmental Protection and Growth Management Department~~Department of Natural Resource Protection~~ and/or Florida Department of Environmental Protection completed application(s). All of the above to be originally signed and sealed by the Engineer of Record.

C. Drawings, specifications and applications will be reviewed by the City within ten (10) working days of submittal. The Engineer of Record will receive back ~~three (3)~~ two (2) sets of approved plans which have been signed by the Director or Utilities Engineer for appropriate action as noted. Comments may be:

1. APPROVED AS PROPOSED: *in this case, one copy of drawings bearing the Utility Division's approval stamp will be returned to the Engineer of Record (E.O.R.).*
2. APPROVED WITH PROVISIONS NOTED OR CHANGES REQUIRED: *the plans may be accepted as corrected. In this case, three copies of drawings bearing the U.D. approval stamp will be returned to the E.O.R. indicating revisions to plans.*
3. RETURNED FOR CORRECTIONS: *the U.D. will instruct the E.O.R. in writing to revise drawings as indicated prior to approval. Engineer of Record will be required to alter or change the submittal to conform with the recommended changes and resubmit same for stamped approval and then transmittal to appropriate agencies for permitting.*
4. REJECTION: *in this case, no further action will be taken by the City unless and until a resubmittal is made.*

It is the intent of the City that all submittals made to other reviewing agencies be approved by the City BEFORE presentation to those agencies.

D. The Engineer of record will be responsible for obtaining all other approvals and permits from all other appropriate agencies or City departments. Drawings and applications approved by the City and reviewing agencies and returned to the Developer's Engineer of Record will then be submitted to the City's Engineer for permit to construct.

E. To construct a utility expansion will require the following in addition to approved plans and applications:

1. Utilities Construction Permit with relevant documentation
2. Compliance with all other City Ordinances

F. The City will provide to all applicants:

1. 1. Normal plan review (first submittal)

2. Dry run (if required) Fees per City Building Division

3. Re-submittal plan review

Normal plan review costs are defined to be all costs associated with: pre-submittal meeting with the City's staff and the Engineer; the first review of the final plans submitted with the application; the preparation of a letter and/or revised drawings to the Developer itemizing any required plan modifications identified in the first review; and the inspection of a first resubmittal to verify that the previously identified modifications have been made.

Abnormal review costs are defined to be any and all review costs that are incurred by the City subsequent to a determination that the first resubmittal has not complied with all requirements identified during the initial plan review. If the City incurs any abnormal plan review costs, the Developer shall be required to pay an additional plan review charge. Said additional charge shall be due and payable at the time a final set of construction plans is approved, prior to the issuance of any permits.

G. Upon completion of a satisfactory final inspection, results will be certified by the City to the several regulating agencies for their use in granting final use permits, according to their requirements.

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- H. At the City's discretion, acceptance of completed systems will be required.

## 1.05 INSPECTION SERVICES GUIDELINES

The following requirements are to be followed by all Engineers of Record providing inspection services for private developments.

A. Personnel:

Inspector - ~~minimum 10 hours/week on field at the job site.~~ Must have at least two years of ~~pre-engineering college education related engineering experience~~, or be a certified engineering inspector, and must have 3 years of directly related inspection experience.

Project Manager - ~~minimum one visit per week to the job site.~~ Must have a degree in engineering and must have minimum of 3 years of directly related experience.

Engineer - must be registered Professional Engineer in the State of Florida. Must have complete knowledge and control over the project.

B. Reports:

Daily inspection reports shall be prepared by the inspector ~~and shall be checked by the Project Managers~~ submitted to the Engineering Division by the Engineer of Record. This report shall reflect the work performed, the work inspected/not inspected, the work approved/not approved, the problems with material, equipment, labor, workmanship, weather, etc., the deviations from approved plans, specifications and schedules, change order recommendations, field decisions, lab and field test reports/results, etc. and any questions for the Engineer or the City. The report shall be signed by the Inspector, and the Project Manager, and shall be forwarded to the Utilities Department, c/o the Utilities Engineer Engineering Division. The

Utilities Department reserves the right to stop construction activity if this documentation is not provided.

C. Meetings (if necessary):

There shall be weekly (or by weekly) progress meetings at the ~~DEES Administration Office~~Engineering Divisions Offices, not to exceed one hour duration. This meeting shall be attended by the Project Manager or Inspector, the Contractor and the City Inspector. The minutes of these meetings shall be documented by the inspector and sent to the City. The meetings for all private development shall be held at the jobsite. The meetings for all public developments shall be held at City Facilities.

D. Responsibilities:

The Engineer of Record shall be completely responsible to enforce the approved plans, specifications schedules, and all applicable codes and regulations, and to make sure that all necessary permits and approvals have been obtained for all agencies.

**1.06 UTILITY INSPECTIONS:** The following inspections shall be performed on utility installations by the public and private sectors.

A. WATER DISTRIBUTION

1. Connection to Existing Systems
2. Filling and Flushing
3. Hydrostatic Pressure Testing
4. Chlorination/Bacteriological Sampling
5. Visual Inspection of all Mechanically Restrained Joints
6. Visual Inspection of Pipe Bedding.

B. SEWER COLLECTION

1. Structures (prior to installation)

2. Connection to Existing Systems
3. Lamping
4. Structure Application of Protective Coatings (external and internal)
5. [Leakage/Infiltration Testing](#)
6. [Visual Inspection of Pipe Bedding.](#)

C. SEWER TRANSMISSION

1. Connection to Existing Systems
2. Flushing
3. Hydrostatic Pressure Testing
4. Pump Station Start-up
5. [Visual Inspection of all Mechanically Restrained Joints](#)
6. [Visual Inspection of Pipe Bedding.](#)

D. REPORTS/DOCUMENTS REQUIRED

1. Inspection Reports as Outlined in Section IV: Inspection Services Guidelines
2. Hydrostatic Pressure Testing Report
3. Satisfactory Bacteriological Sampling Reports
4. Sewer Lamping Report
5. [Leakage/Infiltration Testing Report](#)
- ~~56.~~ HRS Clearance Letter
- ~~67.~~ DEP Certification of Completion Form
- ~~78.~~ D.N.R.P. Approval Letter
- ~~89.~~ Sanitary Sewer Televised Inspection Report and Tapes
- ~~910.~~ Letter of Certification by Engineer of Record.
- ~~11.~~ [Fire Flow Test Results](#)

E. NOTIFICATION



Please call 954-730-~~4224~~-3060 for all Inspections/Appointments 24 hours in advance. Inspections will not be conducted on the same day requested. Forward all documentation to the DEES Engineering/GIS Department, 2000 City Hall Drive, Lauderhill, FL 33313-5581 W. Oakland Park Blvd., Lauderhill, Florida 33313

- F. In the event a test or inspection fails, a required party is not present or the appointment requester fails to cancel within one (1) hour of the scheduled inspection time, the requesting party will be charged a minimum fee as per Section 2 of these standards to cover up to one (1) hour of the inspector's time.
- G. Contractor is responsible for the cost of inspections for any construction activities occurring outside normal working hours (~~7:30~~8:00am to 5:00pm Monday through ~~Friday~~Thursday), Fridays. Saturdays, Sundays and holidays are not considered normal working days. Arrangements for inspections outside normal working hours must be made a minimum of FIVE days in advance of construction activity. Additional inspections or documentation may be required as determined by the DEES Engineering Division.

**1.07 ENGINEERING INSPECTIONS:** The following inspections shall be performed on engineering permits.

A. PAVING:

- 1. Demucking and filling
- 2. Stabilized subgrade
- 3. Limerock basecourses
- 4. Asphalt paving
- 5. Final inspection at the time of Certificate of Occupancy
- 6. Reports Needed:
  - a. density test reports (subgrade and basecourse)
  - b. LBR test reports (subgrade and basecourse)
  - c. calcium carbonate reports (basecourse)
  - d. certification of type of asphalt
  - e. inspection reports for all underground utility lines such as: water, sewer, drainage, gas, power, phone, TV, etc.

- f. certificate that the entire pavement area has been completely demucked and backfilled properly with suitable material.

B. DRAINAGE:

All joints, catch basin/manhole connections and drainfields to be inspected prior to backfill. Final inspection prior to Certificate of Occupancy.

C. SIDEWALKS:

Alignment, depth and pedestrian ramp details, as indicated in the City code of ordinances, to be inspected prior to concrete pouring. Final inspection prior to Certificate of Occupancy.

D. TRAFFIC SIGNS, ROAD SIGNS & PAVEMENT MARKINGS:

To be inspected at final inspection prior to Certificate of Occupancy.

E. NOTIFICATION:

Please call (954)730-~~4224~~-3060 for all inspections 24 hours in advance. Forward all reports to the Engineering/GIS Department, 5581 W. Oakland Park Blvd., Lauderhill, Florida 333313  
~~DEES, Lauderhill City Hall, 2000 City Hall Drive, Lauderhill, FL 33313.~~

### 1.08 FINAL ENGINEERING INSPECTION CHECKLIST

This document sets minimum City inspection criteria. Additional criteria may be required by the City.

The Contractor shall use this checklist to perform a preliminary inspection prior to scheduling the final engineering inspection with the City. It is the Contractor's responsibility to provide personnel to perform the manual aspects of the inspection (i.e., opening manhole lids, turning gate valves, operating fire hydrants, etc.).

#### A. Water Distribution System:

\_\_\_\_1. All features shall be installed according to the approved plans.

\_\_\_\_2. Fire Hydrants:

- \_\_\_\_a. Height (~~18" to 24"~~ +/- 2" from finished grade to nozzle).
- \_\_\_\_b. Direction (5-1/4" nozzle must face accessway).
- \_\_\_\_c. Distance (4' minimum to 7' maximum from curb).
- \_\_\_\_d. Fire hydrant must be plumb.
- \_\_\_\_e. Paint (OSHA reflective traffic yellow bruning 1235 or equal).
- \_\_\_\_f. Reflective pavement markers (place two (2) in the center of the adjacent drive lane).
- \_\_\_\_g. Fire hydrant and fire hydrant gate valve shall be operational.

\_\_\_\_3. Gate Valves:

- \_\_\_\_a. Set to grade.
- \_\_\_\_b. Concrete collar per City specifications.
- \_\_\_\_c. Gate valves shall be operational.
- \_\_\_\_d. Paint (paint valve box lid blue).

- \_\_\_\_\_e. Reflective pavement markers (place one (1) in the center of the adjacent drive lane).

**B. Sewage Collection & Transmission System:**

- \_\_\_\_ 1. All features shall be installed according to the approved plans.
- \_\_\_\_ 2. Collection System:
  - \_\_\_\_ a. Manhole rims shall be visible.
  - \_\_\_\_ b. Manhole rims shall be set to grade.
  - \_\_\_\_ c. Manhole rims shall be attached securely.
  - \_\_\_\_ d. Manhole rims shall be free of asphalt.
  - \_\_\_\_ e. Manhole interiors shall be painted with two coats of approved paint.
  - \_\_\_\_ f. Manhole interiors shall be free of infiltration.
  - \_\_\_\_ g. Detection markers shall be placed at all stub-outs.
  - \_\_\_\_ h. Any stub-out not tied into a building shall have a 6"x6"x5' wooden stake as a marker and shall have the top 12" painted green.
  - \_\_\_\_ i. All pipes shall be free of leaks and infiltration.
  - \_\_\_\_ j. Manholes located in grass areas shall have a concrete collar.
  - \_\_\_\_ k. Clean outs shall be set to grade.
  - \_\_\_\_ l. Rain guards installed in all manholes.
- \_\_\_\_ 3. Force Main Transmission System:
  - \_\_\_\_ a. Force main gate valves shall have concrete collars set to grade and painted green.
  - \_\_\_\_ b. Place green reflective pavement markers in the center of the adjacent drive lane.
  - \_\_\_\_ c. Air release valves and manholes shall be free of any defects.
  - \_\_\_\_ d. The lift station shall be in full operational condition.
  - \_\_\_\_ e. Lift station shall be operational.
  - \_\_\_\_ f. Lift station site shall be accessible by truck via paved driveway.
  - \_\_\_\_ g. All lift station fixtures shall be operational.
  - \_\_\_\_ h. Lift station site shall be fenced and landscaped.

**C. Drainage System and Grading:**

- \_\_\_\_ 1. All features shall be installed according to the approved plans.
- \_\_\_\_ 2. Drainage structures, sumps, and pipes shall be free of debris.
- \_\_\_\_ 3. Catch basins outside paved areas shall have a concrete apron.

- \_\_\_\_ 4. Outfalls shall be complete and clear of debris.
- \_\_\_\_ 5. Inlets shall be free of filter fabric.
- \_\_\_\_ 6. Lake, canal, or ditch banks shall be to grade and slope as per approved plans.
- \_\_\_\_ 7. Erosion protection measures shall be in effect.
- \_\_\_\_ 8. Pollution retardant device shall be in place as per approved plans.
- \_\_\_\_ 9. Flow lines of swales shall be 6" below edge of pavement
- \_\_\_\_ 10. Grates shall be secure.
- \_\_\_\_ 11. Pollution baffles shall be in place as required.
- \_\_\_\_ 12. Head walls shall be in place.

**D. Pavement:**

- \_\_\_\_ 1. All features shall be installed according to the approved plans.
- \_\_\_\_ 2. Alignments and cross-sections of all paved areas shall conform to the approved plans.
- \_\_\_\_ 3. Pavement:
  - \_\_\_\_ a. Pavement shall be clean.
  - \_\_\_\_ b. Pavement shall have second lift placed.
  - \_\_\_\_ c. Pavement shall be free of potholes, cracks, and divots.
  - \_\_\_\_ d. Crown and grade of roadway shall conform to approved plans.
  - \_\_\_\_ e. Pavement markings and signage shall conform to the approved plans.
  - \_\_\_\_ f. Curbs shall be free of cracks and shall otherwise conform to the approved plans.
  - \_\_\_\_ g. Expansion joints shall conform to approved plans.
  - \_\_\_\_ h. Wheelchair ramps shall conform to approved plans.
  - \_\_\_\_ i. Parking spaces shall conform to approved plans.

#### **E. Miscellaneous:**

- \_\_\_\_\_1. Work of other utilities shall be complete.
- \_\_\_\_\_2. Site lighting and street lighting shall be operational.
- \_\_\_\_\_3. Street signs and traffic signs shall be in place.
- \_\_\_\_\_4. Permanent reference monuments (PRM's) with elevations shall be in place.
- \_\_\_\_\_5. All existing facilities disturbed during construction shall be restored.
- \_\_\_\_\_6. Site Wall (Screening and Retaining walls) completed and finished.

#### **1.09 BOND RELEASE PROCEDURES**

This document sets minimum City criteria for performance bond and maintenance release procedures. Additional criteria may be required by the City.

##### **A. For Performance Bond Release:**

The Developer/Owner must provide the City Engineer with the following, 30 days before the performance bond release inspection:

- \_\_\_\_\_1. One (1) complete set of acceptable ~~mylar~~ "as-built" drawings for water, sewer, paving, drainage, and geometric controls. In electronic format (PDF and CAD)
- \_\_\_\_\_2. Five (5) complete sets of acceptable ~~blue-line "as-built" record drawings certified by the Engineer of Record~~ drawings, two (2) of which are to be forwarded to the ~~Community Development Department~~ Planning and Zoning Division, and one (1) complete set of "as-builts" in digital format (i.e., ~~autocadd 12 or higher~~ Current AutoCAD version or transportable to a dxf format) including sheets for all water, sewer, paving, drainage, details, and geometric controls, certified by the Engineer of Record.\*
- \_\_\_\_\_3. All utility easements, legal descriptions, and sketches, in recordable form.

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\* If "record drawings" in digital format are not provided to the City, there will be a two-hundred dollar (\$200.00) per sheet charge to the developer to reimburse the City for making the conversion.

- \_\_\_\_\_4. A bill of sale with the actual value of all public improvements to be transferred to the City.
- \_\_\_\_\_5. All release of liens for public improvements to be transferred to the City.
- \_\_\_\_\_6. Completion of all items on the water distribution section of the final engineering inspection checklist.
- \_\_\_\_\_7. Completion of all items on the sewer collection and transmission section of the final engineering inspection checklist.
- \_\_\_\_\_8. Completion of all items on the pavement section of the final engineering inspection checklist.
- \_\_\_\_\_9. Completion of all items on the drainage and grading section of the final engineering checklist.
- \_\_\_\_\_10. The actual construction cost for all improvements.

Within thirty (30) working days, the City will inform the Developer in writing if the public improvements are acceptable. If the public improvements are acceptable, the Developer will submit a maintenance bond to the City. If the maintenance bond is acceptable to the City staff will release the performance bond.

**B. For Maintenance Bond Release:**

A letter of notification will be mailed to the Developer, approximately ninety (90) days prior to the maintenance bond expiration date, by the City. If fifty (50) percent of the certificates of occupancy have been issued for the buildings in the improved area, the City will request the Developer to arrange for reinspection for the bonded improvements.

- \_\_\_\_\_1. Completion of all items on the water distribution section of the final engineering inspection checklist.
- \_\_\_\_\_2. Completion of all items on the sewer collection and transmission section of the final engineering inspection checklist.



- \_\_\_\_\_3. Completion of all items on the pavement section of the final engineering inspection checklist.
- \_\_\_\_\_4. Completion of all items on the drainage and grading section of the final engineering inspection checklist.

Any defects in the water distribution, sewer collection or paving, grading and drainage, must be corrected and completed, and approved by the City twenty-one (21) days prior to the bond expiration date. Otherwise, the maintenance bond shall be extended until all deficiencies are completed and approved.